

CLAIMS

What is claimed is:

1. A method of fabricating a photomask that facilitates accurate measurement of the photomask critical dimension, comprising the steps of:
transferring a first pattern on a substrate in a first area;
transferring at least one test pattern on the substrate outside of the first area; and
attaching a pellicle to the substrate, wherein the pellicle covers the first area, but does not cover the at least one test pattern.
2. The method of claim 1, further comprising the step of duplicating a portion of the first pattern as the test pattern.
3. The method of claim 2, wherein the step of duplicating a portion of the first pattern as the test pattern includes using optical proximity correction in the test pattern.
4. The method of claim 3, wherein the step of using optical proximity correction includes using shapes selected from the group consisting of serifs, hammerheads and scattering bars.
5. The method of claim 1, further comprising the step of transferring the first pattern and the at least one test pattern substantially simultaneously on the substrate.
6. The method of claim 1, further comprising the step of forming the first pattern and the at least one test pattern under substantially the same conditions.
7. A photomask that facilitates accurate measurement of the photomask critical dimension, comprising:

a substrate;
a first pattern formed on the substrate;
at least one test pattern formed on the substrate; and
a pellicle attached to the substrate, wherein the pellicle is not attached over the at least one test pattern.

8. The photomask of claim 7, wherein the test pattern is derived from a portion of the first pattern.

9. The photomask of claim 7, wherein the test pattern includes optical proximity correction.

10. The photomask of claim 9, wherein the optical proximity correction includes shapes selected from the group consisting of serifs, hammerheads and scattering bars.

11. The photomask of claim 7, wherein the photomask is a binary chrome-on-glass mask.

12. The photomask of claim 7, wherein the photomask is a phase shifting mask.

13. A method of monitoring a critical dimension of a photomask including a substrate having a first pattern in a first area, a test pattern in a second area outside of the first area, and a pellicle attached to the substrate which covers the first area but does not cover the second area, wherein a critical dimension of the test pattern is similar in magnitude to a critical dimension of the first pattern, the method comprising the steps of:

measuring the critical dimension of the test pattern at a time when the pellicle is attached to the substrate; and

estimating the critical dimension of the first pattern based on the measuring step.